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1. Document ID: US 20050059882 A1 Relevance Rank: 78

L9: Entry 1 of 1

File: PGPB

Mar 17, 2005

PGPUB-DOCUMENT-NUMBER: 20050059882

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050059882 A1

TITLE: SHIELDED DOME RESONATOR FOR MR SCANNING OF A CEREBRUM

PUBLICATION-DATE: March 17, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Tropp, James S.	Berkeley	CA	US

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE	CODE
GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY COMPANY, LLC	Waukesha	WI	US		02

APPL-NO: 10/605184 [PALM]

DATE FILED: September 12, 2003

INT-CL-PUBLISHED: [07] A61B 5/05, G01V 3/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	<u>A61 B 5/055</u>	20060101
CIPS	<u>G01 R 33/34</u>	20060101
CIPS	<u>G01 R 33/341</u>	20060101

US-CL-PUBLISHED: 600/422; 324/322

US-CL-CURRENT: 600/422; 324/322

REPRESENTATIVE-FIGURES: 2B

ABSTRACT:

A dome resonator (11) includes a resonator circuit (70) that excites and/or receives radio frequency magnetic resonance signals that emanate from a region of

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 5315251 A Relevance Rank: 99

L27: Entry 1 of 1

File: USPT

May 24, 1994

US-PAT-NO: 5315251

DOCUMENT-IDENTIFIER: US 5315251 A

TITLE: NMR radio-frequency coil

DATE-ISSUED: May 24, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Derby; Kevin A.	San Bruno	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Toshiba America MRI, Inc.		CA			02

APPL-NO: 08/067341 [PALM]

DATE FILED: May 25, 1993

PARENT-CASE:

This is a continuation of co-pending application Ser. No. 07/630,158 filed on Dec. 19, 1990 now abandoned.

INT-CL-ISSUED: [05] G01V 3/00

INT-CL-CURRENT:

TYPE IPC	DATE
CIPP <u>G01 R 33/34</u>	20060101

US-CL-ISSUED: 324/318; 324/322

US-CL-CURRENT: 324/318; 324/322

FIELD-OF-CLASSIFICATION-SEARCH: 324/318, 324/322, 324/313, 324/314, 324/307
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

In the present invention, an NMR radio-frequency coil suitable for head imaging is disclosed. The coil has a first current path for the generation of the magnetic field. The first current path lies in a first plane and has an arcuate region which is adapted to arch over the head of the patient. A second current path supplies current to the first current path. The second current path lies in a second plane which is substantially perpendicular to the first plane. The coil is suitable for use in a coupled resonator system.

21 Claims, 9 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMIC	Draw D
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Term	Documents
"5315251"	1
5315251S	0
"5315251".PN..USPT.	1
('5315251'.PN.).USPT.	1

Display Format:

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10/605,184
Hit List

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Search Results - Record(s) 1 through 5 of 5 returned.

☐ 1. Document ID: US 20050059882 A1 Relevance Rank: 95

L20: Entry 5 of 5

File: DWPI

Mar 17, 2005

DERWENT-ACC-NO: 2005-282890
DERWENT-WEEK: 200642
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TITLE: Dome resonator for magnetic resonance scanning of cerebrum, has resonator circuit exciting or receiving radio frequency magnetic resonance signals, resonator circuit support, and shield for isolating circuit from surrounding environment

INVENTOR: TROPP, J S

PATENT-ASSIGNEE: GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY CO (GENE)

PRIORITY-DATA: 2003US-0605184 (September 12, 2003)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 20050059882 A1</u>	March 17, 2005		012	A61B005/05

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
US20050059882A1	September 12, 2003	2003US-0605184	

INT-CL (IPC): A61B 5/05; G01V 3/00

ABSTRACTED-PUB-NO: US20050059882A
BASIC-ABSTRACT:

NOVELTY - A dome resonator (11') comprises a resonator circuit (70) exciting or receiving radio frequency magnetic resonance (MR) signals in a region of interest and having longitudinal conductive elements coupled at two ends (80, 82) and tapered from the two ends. A resonator circuit support (74) is coupled to and supports the circuit. A shield (76) is coupled to the circuit support and electrically isolates the circuit from a surrounding environment.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(A) a MR imaging system comprising a magnet structure having a super conducting magnet generating and applying a series of magnetic field gradient pulses across a region of interest, a dome resonator, and a signal processing system coupled to the dome resonator and reconstructing an image for the region of interest in response

2. Document ID: US 20050059882 A1 Relevance Rank: 91

Mar 17, 2005

PGPUB-DOCUMENT-NUMBER: 20050059882
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050059882 A1

TITLE: SHIELDED DOME RESONATOR FOR MR SCANNING OF A CEREBRUM

PUBLICATION-DATE: March 17, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Tropp, James S.	Berkeley	CA	US

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE	CODE
GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY COMPANY, LLC	Waukesha	WI	US	02	

APPL-NO: 10/605184 [PALM]
DATE FILED: September 12, 2003

INT-CL-PUBLISHED: [07] A61B 5/05, G01V 3/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	<u>A61</u> <u>B</u> <u>5/055</u>	20060101
CIPS	<u>G01</u> <u>R</u> <u>33/34</u>	20060101
CIPS	G01 R 33/341	20060101

US-CL-PUBLISHED: 600/422; 324/322
US-CL-CURRENT: 600/422; 324/322

REPRESENTATIVE-FIGURES: 2B

ABSTRACT:

A dome resonator (11) includes a resonator circuit (70) that excites and/or receives radio frequency magnetic resonance signals that emanate from a region of interest (14). The resonator circuit (70) includes multiple longitudinal conductive elements (110) that are coupled at a first end (80) and a second end (82) and tapered from the first end (80) to the second end (82). A resonator circuit support (74) is coupled to and supports the resonator circuit (70). A shield (76) is coupled to the resonator circuit support (74) and electrically isolates the resonator circuit (70) from a surrounding environment.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	IMC	Draws
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3. Document ID: US 20020040185 A1 Relevance Rank: 73

L20: Entry 3 of 5

File: PGPB

Apr 4, 2002

PGPUB-DOCUMENT-NUMBER: 20020040185
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020040185 A1

TITLE: Systems and methods for evaluating the urethra and the periurethral tissues

PUBLICATION-DATE: April 4, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Atalar, Ergin	Columbia	MD	US
Quick, Harald	Essen-Werden	MD	DE
Karmarkar, Parag	Elliott City		US

APPL-NO: 09/824536 [PALM]
DATE FILED: April 2, 2001

RELATED-US-APPL-DATA:

Application 09/824536 is a continuation-in-part-of US application 09/536090, filed March 24, 2000, PENDING
Application 09/824536 is a continuation-in-part-of US application 09/549921, filed April 14, 2000, PENDING
Application 09/824536 is a continuation-in-part-of US application 09/191563, filed November 13, 1998, US Patent No. 6263229
Application 09/824536 is a continuation-of US application 09/817893, filed March 26, 2001, PENDING
Application is a non-provisional-of-provisional application 60/194060, filed March 31, 2000,

INT-CL-PUBLISHED: [07] A61B 5/055

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPN	A61 B 1/307	20060101
CIPN	A61 B 1/31	20060101
CIPS	A61 B 5/055	20060101
CIPS	H01 Q 1/00	20060101
CIPS	H01 Q 1/40	20060101
CIPS	H01 Q 1/44	20060101
CIPN	A61 B 1/273	20060101
CIPN	A61 B 1/303	20060101
CIPS	G01 R 33/34	20060101
CIPS	G01 R 33/28	20060101
CIPS	H01 Q 1/36	20060101
CIPS	H01 Q 11/00	20060101

CIPS H01 Q 11/08 20060101

US-CL-PUBLISHED: 600/423

US-CL-CURRENT: 600/423

REPRESENTATIVE-FIGURES: 6

ABSTRACT:

The present invention provides systems and methods for the evaluation of the urethra and periurethral tissues using an MRI coil adapted for insertion into the male, female or pediatric urethra. The MRI coil may be in electrical communication with an interface circuit made up of a tuning-matching circuit, a decoupling circuit and a balun circuit. The interface circuit may also be in electrical communication with a MRI machine. In certain practices, the present invention provides methods for the diagnosis and treatment of conditions involving the urethra and periurethral tissues, including disorders of the female pelvic floor, conditions of the prostate and anomalies of the pediatric pelvis.

REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 60/194,060 filed Mar. 31, 2000, and is a continuation-in-part of U.S. patent application Ser. No. 09/536,090 filed Mar. 24, 2000, Ser. No. 09/549,921 filed Mar. 14, 2000, Ser. No. 09/191,563 filed Nov. 13, 1998, and "Apparatus, Systems and Methods for In Vivo MRI," filed Mar. 26, 2001. The entire disclosure of each of these applications is herein incorporated by reference.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	1000C	Draw D
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☐ 4. Document ID: US 6898454 B2 Relevance Rank: 73

L20: Entry 4 of 5

File: USPT

May 24, 2005

US-PAT-NO: 6898454

DOCUMENT-IDENTIFIER: US 6898454 B2

TITLE: Systems and methods for evaluating the urethra and the periurethral tissues

DATE-ISSUED: May 24, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Atalar; Ergin	Columbia	MD		
Quick; Harald Hartmann	Essen-Werden			DE
Karmarkar; Parag	Elliot City	MD		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
The Johns Hopkins University	Baltimore	MD			02

Analysis and Application to Canine Iliofemoral Imaging, Magn. Resonance in Medicine, Apr. 1992, pp. 343-357, vol. 24.
Dumoulin et al., Real-Time Position Monitoring of Invasive Devices Using Magnetic Resonance, Magnetic Resonance in Medicine, Mar. 1993, pp. 411-415, vol. 29.
Koechli et al., Catheters and Guide Wires for Use in an Echo-Planar MR Fluoroscopy System, R. 79th Scientific Meeting, editor, Radiology, Nov. 1993, p. 319, vol. 189 (P).
McDonald et al, Performance Comparison of Several Coil Geometries for Use in Catheters (Abstract), R. 79th Scientific Meeting, editor, Radiology, Nov. 1993, p. 319, vol. 189(P).
Merickel et al.; Noninvasive Quantitative Evaluation of Atherosclerosis Using MRI and Image Analysis, Arteriosclerosis and Thrombosis, 1993, pp. 1180-1186, vol. 13.
Spears et al., In Vivo Coronary Angioscopy, Journal of the American College of Cardiology, May 1993, pp. 1311-1314, vol. 1 (USA).
Yuan et al., Techniques for High-Resolution MR Imaging of Atherosclerotic Plaque, J. Magnetic Resonance Imaging, 1994, pp. 43-49, vol. 4, No. 1.
Martin et al., Intravascular MR Imaging in a Porcine Animal Model, Magn. Resonance in Medicine, Aug. 1994, pp. 224-229, vol. 32.

ART-UNIT: 3742

PRIMARY-EXAMINER: Robinson; Daniel

ATTY-AGENT-FIRM: Foley Hoag LLP Kamholz; Scott E.

ABSTRACT:

The present invention provides systems and methods for the evaluation of the urethra and periurethral tissues using an MRI coil adapted for insertion into the male, female or pediatric urethra. The MRI coil may be in electrical communication with an interface circuit made up of a tuning-matching circuit, a decoupling circuit and a balun circuit. The interface circuit may also be in electrical communication with a MRI machine. In certain practices, the present invention provides methods for the diagnosis and treatment of conditions involving the urethra and periurethral tissues, including disorders of the female pelvic floor, conditions of the prostate and anomalies of the pediatric pelvis.

62 Claims, 27 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	Keywords	Drawings
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5. Document ID: US 20060122493 A1 Relevance Rank: 72

L20: Entry 1 of 5

File: PGPB

Jun 8, 2006

PGPUB-DOCUMENT-NUMBER: 20060122493

PGPUB-FILING-TYPE:

DOCUMENT-IDENTIFIER: US 20060122493 A1

TITLE: Evaluating the urethra and the periurethral Tissues

PUBLICATION-DATE: June 8, 2006

CROSS-REFERENCE TO RELATED APPLICATIONS

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	IMMC	Draw De
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Term.	Documents
CIRCUIT	4436901
CIRCUITS	1376209
SUPPORT	3844719
SUPPORTS	1317029
(19 AND (SUPPORT WITH CIRCUIT)) .PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	5
(L19 AND (CIRCUIT WITH SUPPORT)) .PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	5

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Search Results - Record(s) 1 through 23 of 23 returned.

☐ 1. Document ID: US 20050059882 A1 Relevance Rank: 95

L21: Entry 3 of 23

File: PGPB

Mar 17, 2005

PGPUB-DOCUMENT-NUMBER: 20050059882

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050059882 A1

TITLE: SHIELDED DOME RESONATOR FOR MR SCANNING OF A CEREBRUM

PUBLICATION-DATE: March 17, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Tropp, James S.	Berkeley	CA	US

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE	CODE
GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY COMPANY, LLC	Waukesha	WI	US		02

APPL-NO: 10/605184 [PALM]

DATE FILED: September 12, 2003

INT-CL-PUBLISHED: [07] A61B 5/05, G01V 3/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	<u>A61 B 5/055</u>	20060101
CIPS	<u>G01 R 33/34</u>	20060101
CIPS	<u>G01 R 33/341</u>	20060101

US-CL-PUBLISHED: 600/422; 324/322

US-CL-CURRENT: 600/422; 324/322

REPRESENTATIVE-FIGURES: 2B

ABSTRACT:

A dome resonator (11) includes a resonator circuit (70) that excites and/or receives radio frequency magnetic resonance signals that emanate from a region of

interest (14). The resonator circuit (70) includes multiple longitudinal conductive elements (110) that are coupled at a first end (80) and a second end (82) and tapered from the first end (80) to the second end (82). A resonator circuit support (74) is coupled to and supports the resonator circuit (70). A shield (76) is coupled to the resonator circuit support (74) and electrically isolates the resonator circuit (70) from a surrounding environment.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	BOOC	Drawings
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2. Document ID: US 20050059882 A1 Relevance Rank: 94

L21: Entry 23 of 23

File: DWPI

Mar 17, 2005

DERWENT-ACC-NO: 2005-282890

DERWENT-WEEK: 200642

COPYRIGHT 2007 DERWENT INFORMATION LTD

TITLE: Dome resonator for magnetic resonance scanning of cerebrum, has resonator circuit exciting or receiving radio frequency magnetic resonance signals, resonator circuit support, and shield for isolating circuit from surrounding environment

INVENTOR: TROPP, J S

PATENT-ASSIGNEE: GE MEDICAL SYSTEMS GLOBAL TECHNOLOGY CO (GENE)

PRIORITY-DATA: 2003US-0605184 (September 12, 2003)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 20050059882 A1</u>	March 17, 2005		012	A61B005/05

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
US20050059882A1	September 12, 2003	2003US-0605184	

INT-CL (IPC): A61B 5/05; G01V 3/00

ABSTRACTED-PUB-NO: US20050059882A

BASIC-ABSTRACT:

NOVELTY - A dome resonator (11') comprises a resonator circuit (70) exciting or receiving radio frequency magnetic resonance (MR) signals in a region of interest and having longitudinal conductive elements coupled at two ends (80, 82) and tapered from the two ends. A resonator circuit support (74) is coupled to and supports the circuit. A shield (76) is coupled to the circuit support and electrically isolates the circuit from a surrounding environment.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(A) a MR imaging system comprising a magnet structure having a super conducting magnet generating and applying a series of magnetic field gradient pulses across a region of interest, a dome resonator, and a signal processing system coupled to the

☐ 3. Document ID: US 6873156 B2 Relevance Rank: 78

L21: Entry 11 of 23

File: USPT

Mar 29, 2005

US-PAT-NO: 6873156

DOCUMENT-IDENTIFIER: US 6873156 B2

TITLE: Method and apparatus for performing neuroimaging

DATE-ISSUED: March 29, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ferris; Craig F.	Holden	MA		
King; Jean A	Worcester	MA		
Allard; Arthur C.	Templeton	MA		
Ludwig; Reinhold	Paxton	MA		
Bogdanov; Gene	Manchester	CT		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Insight Neuroimaging Systems, LLC	Worcester	MA			02

APPL-NO: 10/365952 [PALM]

DATE FILED: February 13, 2003

PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS This application is a divisional application of U.S. patent application Ser. No.: 09/694,087, filed Oct. 20, 2000, now U.S. Pat. No. 6,711,430 which is a continuation-in-part of U.S. patent application Ser. No. 09/073,546, filed on May 6, 1998, now abandoned both of which are hereby incorporated by reference in their entirety.

INT-CL-ISSUED: [07] G01V 3/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	<u>G01 R 33/28</u>	20060101
CIPS	<u>A61 B 5/055</u>	20060101

US-CL-ISSUED: 324/318; 324/309

US-CL-CURRENT: 324/318; 324/309

FIELD-OF-CLASSIFICATION-SEARCH: 324/318, 324/309, 324/307, 324/319, 324/322, 660/410, 128/653.1

See application file for complete search history.

PRIOR-ART-DISCLOSED:

6275723

August 2001

Ferris

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
44 08 194	September 1995	DE	
0290187	November 1988	EP	
WO-00/57782	October 2000	WO	

OTHER PUBLICATIONS

K. Kamada et al., "Anatomical and functional imaging of the auditory cortex in awake mustached bats using magnetic resonance technology" Brain Research Protocols, vol. 4, 1999, pp. 351-359.

K. Lahti et al., "Imaging brain activity in conscious animals using functional MRI" Journal of Neuroscience Methods, vol. 82 No. 1, Jul. 1, 1998, pp. 75-83.

T. Kamiryo et al., "Enhanced Magnetic Resonance Imaging of the Rat Brain Using a Stereotactic Device with a Small Head Coil: Technical Note," Act Neurochir 133:87-92 (1995).

E. Tabuchi et al., "Functional MRI Using Awake Animal: Brain Activity Induced by Drinking" Jpn. J. Physiol 45(1):S194 (1995).

ART-UNIT: 2859

PRIMARY-EXAMINER: Shrivastav; Brij B.

ATTY-AGENT-FIRM: Darby & Darby

ABSTRACT:

The present invention relates to systems and methods of performing magnetic resonance imaging (MRI) in awake animals. The invention utilizes head and body restrainers to position an awake animal relative to a radio frequency dual coil system operating in a high field magnetic resonance imaging system to provide images of high resolution without motion artifact.

19 Claims, 41 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	MOOC	Draw D
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☐ 4. Document ID: US 20060283945 A1 Relevance Rank: 76

L21: Entry 1 of 23

File: PGPB

Dec 21, 2006

PGPUB-DOCUMENT-NUMBER: 20060283945

PGPUB-FILING-TYPE:

DOCUMENT-IDENTIFIER: US 20060283945 A1

TITLE: Sample identification utilizing RFID tags

5. Document ID: US 6711430 B1 Relevance Rank: 75

L21: Entry 13 of 23

File: USPT

Mar 23, 2004

US-PAT-NO: 6711430

DOCUMENT-IDENTIFIER: US 6711430 B1

TITLE: Method and apparatus for performing neuroimaging

DATE-ISSUED: March 23, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ferris; Craig F.	Holden	MA		
King; Jean A	Worcester	MA		
Allard; Arthur C.	Templeton	MA		
Ludwig; Reinhold	Paxton	MA		
Bogdanov; Gene	Manchester	CT		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Insight Neuroimaging Systems, Inc.	Worcester	MA			02

APPL-NO: 09/694087 [PALM]

DATE FILED: October 20, 2000

PARENT-CASE:

RELATED APPLICATION(S) This application is a is a continuation-in-part of U.S. application Ser. No. 09/169,602 filed on Oct. 9, 1998 now U.S. Pat. No. 6,275,723 issued Aug. 14, 2001, the entire teachings of which are incorporated herein by reference.

INT-CL-ISSUED: [07] A61B 5/055, G01V 3/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPP	<u>A61 B 5/055</u>	20060101

US-CL-ISSUED: 600/417; 600/422, 324/318

US-CL-CURRENT: 600/417; 324/318, 600/422

FIELD-OF-CLASSIFICATION-SEARCH: 600/415, 600/417, 600/421, 600/422, 324/318, 324/322, 606/130

See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

00/57782

October 2000

WO

OTHER PUBLICATIONS

K. Kamada et al., "Anatomical and functional imaging of the auditory cortex in awake mustached bats using magnetic resonance technology" Brain Research Protocols, vol. 4, 1999, pp. 351-359.

K. Lahti et al., "Imaging brain activity in conscious animals using functional MRI" Journal of Neuroscience Methods, vol. 82, No. 1, Jul. 1, 1998, pp. 75-83.

T. Kamiryo, et al., "Enhanced Magnetic Resonance Imaging of the Rat Brain Using a Stereotactic Device with a Small Head Coil: Technical Note", Act Neurochir 133:87-92 (1995).

E. Tabuchi, et al., "Functional MRI Using Awake Animal: Brain Activity Induced by Drinking", Jpn. J. Physiol 45(1):S194 (1995).

ART-UNIT: 3737

PRIMARY-EXAMINER: Shaw; Shawna J.

ATTY-AGENT-FIRM: Darby & Darby

ABSTRACT:

The present invention relates to systems and methods of performing magnetic resonance imaging (MRI) in awake animals. The invention utilizes head and body restrainers to position an awake animal relative to a radio frequency dual coil system operating in a high field magnetic resonance imaging system to provide images of high resolution without motion artifact.

31 Claims, 41 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	FIGS	Drawings
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☐ 6. Document ID: US 20030164703 A1 Relevance Rank: 75

L21: Entry 7 of 23

File: PGPB

Sep 4, 2003

PGPUB-DOCUMENT-NUMBER: 20030164703

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030164703 A1

TITLE: Method and apparatus for performing neuroimaging

PUBLICATION-DATE: September 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Ferris, Craig F.	Holden	MA	US
King, Jean A.	Worcester	MA	US
Allard, Arthur C.	Templeton	MA	US
Ludwig, Reinhold	Paxton	MA	US

ASSIGNEE-INFORMATION:

APPL-NO: 10/365952 [PALM]
DATE FILED: February 13, 2003

RELATED-US-APPL-DATA:

child 10365952 A1 20030213
parent division-of 09694087 20001020 US PENDING
child 09694087 20001020 US
parent continuation-in-part-of 09073546 19980506 US ABANDONED

INT-CL-PUBLISHED: [07] G01V 3/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	G01 R 33/28	20060101
CIPS	A61 B 5/055	20060101

US-CL-PUBLISHED: 324/318; 324/322
US-CL-CURRENT: 324/318; 324/322

REPRESENTATIVE-FIGURES: 1, 12

ABSTRACT:

The present invention relates to systems and methods of performing magnetic resonance imaging (MRI) in awake animals. The invention utilizes head and body restrainers to position an awake animal relative to a radio frequency dual coil system operating in a high field magnetic resonance imaging system to provide images of high resolution without motion artifact.

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is a divisional application of U.S. patent application Ser. No.: 09/694,087, filed Oct. 20, 2000, which is a continuation-in-part of U.S. patent application Ser. No. 09/073,546, filed on May 6, 1998, both of which are hereby incorporated by reference in their entirety.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	COMC	Draw D
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7. Document ID: US 5602479 A Relevance Rank: 75

L21: Entry 21 of 23

File: USPT

Feb 11, 1997

US-PAT-NO: 5602479
DOCUMENT-IDENTIFIER: US 5602479 A

TITLE: Quadrature radio frequency coil for magnetic resonance imaging

DATE-ISSUED: February 11, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Srinivasan; Ravi	Richmond Hts.	OH		
Liu; Haiying	Euclid	OH		
Elek; Robert A.	Chardon	OH		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Picker International, Inc.	Highland Heights	OH			02

APPL-NO: 08/512388 [PALM]

DATE FILED: August 8, 1995

INT-CL-ISSUED: [06] G01R 33/20

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPP	G01 R 33/34	20060101

US-CL-ISSUED: 324/318; 324/322, 128/653.5

US-CL-CURRENT: 324/318; 324/322

FIELD-OF-CLASSIFICATION-SEARCH: 324/318, 324/322, 324/300, 324/314, 324/312, 324/316, 128/653.5

See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4692705</u>	September 1987	Hayes	324/318
<u>4769605</u>	September 1988	Fox	324/322
<u>4887039</u>	December 1989	Roemer et al.	324/318
<u>4987370</u>	January 1991	Leussler et al.	324/318
<u>5030915</u>	July 1991	Boskamp et al.	324/318
<u>5212450</u>	May 1993	Murphy-Boesch et al.	324/322
<u>5235277</u>	August 1993	Wichern	324/318
<u>5256971</u>	October 1993	Boskamp	324/318
<u>5258717</u>	November 1993	Misic et al.	324/318
<u>5315251</u>	May 1994	Derby	324/322
<u>5347220</u>	September 1994	Van Heelsbergen	324/318
<u>5515855</u>	May 1996	Meyer et al.	324/318

OTHER PUBLICATIONS

☐ 8. Document ID: US 6710598 B2 Relevance Rank: 73

L21: Entry 14 of 23

File: USPT

Mar 23, 2004

US-PAT-NO: 6710598

DOCUMENT-IDENTIFIER: US 6710598 B2

TITLE: RF surface resonator for a magnetic resonance imaging apparatus

DATE-ISSUED: March 23, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leussler; Christoph Guenther	Hamburg			DE
Zahn; Daniel	Hamburg			DE

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Koninklijke Philips <u>Electronics</u> N.V.	Eindhoven			NL		03

APPL-NO: 10/181595 [PALM]

DATE FILED: July 16, 2002

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DE	100 56 807	November 16, 2000

PCT-DATA:

APPL-NO	DATE-FILED	PUB-NO	PUB-DATE	371-DATE
PCT/EP01/13259	November 14, 2001	WO02/41020	May 23, 2002	

INT-CL-ISSUED: [07] G01V 3/00

INT-CL-CURRENT:

TYPE IPC	DATE
CIPS <u>G01 R 33/34</u>	20060101
CIPN <u>G01 R 33/28</u>	20060101
CIPS <u>G01 R 33/341</u>	20060101
CIPN <u>G01 R 33/422</u>	20060101

US-CL-ISSUED: 324/318; 324/322, 600/422

US-CL-CURRENT: 324/318; 324/322, 600/422

FIELD-OF-CLASSIFICATION-SEARCH: 324/318, 324/322, 324/300, 324/307, 324/309, 324/314, 600/422, 600/421

See application file for complete search history.

PRIOR-ART-DISCLOSED:

other side, and also capacitive elements (Clx) in the conductor structures and/or conductor loops. Finally, a desirable variation of the field strength can also be achieved by the separation of parts of the surface resonator by means of diodes (Dx) that can be switched.

11 Claims, 14 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	RMK	Drawing
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9. Document ID: US 20020057087 A1 Relevance Rank: 72

L21: Entry 9 of 23

File: PGPB

May 16, 2002

PGPUB-DOCUMENT-NUMBER: 20020057087

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020057087 A1

TITLE: Asymmetric radio frequency coils for magnetic resonance

PUBLICATION-DATE: May 16, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Crozier, Stuart	Wilston		AU
Lawrence, Ben	St. Lucia		AU
Yau, Desmond	Toowong		AU
Luescher, Kurt	Indooroopilly		AU
Roffman, Wolfgang Udo	Mount Gravatt East		AU
Doddrell, David Michael	Westlake		AU

APPL-NO: 09/947178 [PALM]

DATE FILED: September 5, 2001

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
AU	PR0059	2000AU-PR0059	September 11, 2000

INT-CL-PUBLISHED: [07] G01V 3/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPP	<u>G01 R 33/34</u>	20060101

US-CL-PUBLISHED: 324/318; 324/309, 324/307, 324/322

US-CL-CURRENT: 324/318; 324/307, 324/309, 324/322

REPRESENTATIVE-FIGURES: 14 16

ABSTRACT:

Asymmetric radio frequency (RF) coils for magnetic resonance applications are provided. Also provided are time harmonic methods for designing such coils as well as symmetric coils. In addition, methods for converting complex current density functions into discrete capacitive and inductive elements are provided.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	MMO	Draw D
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10. Document ID: US 20040189303 A1 Relevance Rank: 72

L21: Entry 5 of 23

File: PGPB

Sep 30, 2004

PGPUB-DOCUMENT-NUMBER: 20040189303

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040189303 A1

TITLE: Asymmetric radio frequency coils for magnetic resonance

PUBLICATION-DATE: September 30, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Crozier, Stuart	Wilston		AU
Lawrence, Ben	St. Lucia		AU
Yau, Desmond	Toowong		AU
Luescher, Kurt	Indooroopilly		AU
Roffman, Wolfgang Udo	Mount Gravatt East		AU
Doddrell, David Michael	Westlake		AU

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
<u>NMR</u> Holdings No. 2 Pty Limited	Milton		AU	03

APPL-NO: 10/822398 [PALM]

DATE FILED: April 12, 2004

RELATED-US-APPL-DATA:

child 10822398 A1 20040412

parent division-of 09947178 20010905 US GRANTED

parent-patent 6720768 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
AU	PR0059	2000AU-PR0059	September 11, 2000

INT-CL-PUBLISHED: [07] G01V 3/00

INT-CL-CURRENT:

TYPE IPC DATE
CIPP G01 R 33/34 20060101

US-CL-PUBLISHED: 324/318
US-CL-CURRENT: 324/318

REPRESENTATIVE-FIGURES: 16

ABSTRACT:

Asymmetric radio frequency (RF) coils for magnetic resonance applications are provided. Also provided are time harmonic methods for designing such coils as well as symmetric coils. In addition, methods for converting complex current density functions into discrete capacitive and inductive elements are provided.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	R00C	Drawings
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11. Document ID: US 6720768 B2 Relevance Rank: 72

L21: Entry 12 of 23

File: USPT

Apr 13, 2004

US-PAT-NO: 6720768
DOCUMENT-IDENTIFIER: US 6720768 B2

TITLE: Asymmetric radio frequency coils for magnetic resonance

DATE-ISSUED: April 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Crozier; Stuart	Wilston			AU
Lawrence; Ben	St. Lucia			AU
Yau; Desmond	Toowong			AU
Luescher; Kurt	Indooroopilly			AU
Roffman; Wolfgang Udo	Mount Gravatt East			AU
Doddrell; David Michael	Westlake			AU

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
<u>NMR</u> Holdings No. 2 Pty Limited	Woolloomooloo			AU	.03

APPL-NO: 09/947178 [PALM]
DATE FILED: September 5, 2001

INT-CL-ISSUED: [07] G01V 3/00

INT-CL-CURRENT:

TYPE IPC DATE

Full	Title	Citation	Front	Review	Classification	Date	Reference	2-8473	2-8473	Claims	KMC	Draw D
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12. Document ID: US 6029082 A Relevance Rank: 72

L21: Entry 18 of 23

File: USPT

Feb 22, 2000

US-PAT-NO: 6029082

DOCUMENT-IDENTIFIER: US 6029082 A

TITLE: Less-claustrophobic, quadrature, radio-frequency head coil for nuclear magnetic resonance

DATE-ISSUED: February 22, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Srinivasan; Ravi	Richmond Heights	OH		
Liu; Haiying	Minneapolis	MN		
Elek; Robert A.	Chardon	OH		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Picker International, Inc.	Highland Heights	OH			02

APPL-NO: 08/976857 [PALM]

DATE FILED: November 24, 1997

INT-CL-ISSUED: [07] A61B 5/055

INT-CL-CURRENT:

TYPE IPC DATE
CIPP G01 R 33/34 20060101

US-CL-ISSUED: 600/422; 324/318, 324/322

US-CL-CURRENT: 600/422; 324/318, 324/322

FIELD-OF-CLASSIFICATION-SEARCH: 600/422, 600/410, 324/318, 324/322

See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>4692705</u>	September 1987	Hayes	324/318
<u>4769605</u>	September 1988	Fox et al.	324/322
<u>5212450</u>	May 1993	Murphy-Boesch et al.	
<u>5277183</u>	January 1994	Vij	128/653.5

individual linear modes. Thus, the radio frequency coil is able to maintain two preferred principal linear modes (A, B) across the open area of the coil.

17 Claims, 7 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMC	Draw D
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13. Document ID: US 6591128 B1 Relevance Rank: 72

L21: Entry 15 of 23

File: USPT

Jul 8, 2003

US-PAT-NO: 6591128

DOCUMENT-IDENTIFIER: US 6591128 B1

TITLE: MRI RF coil systems having detachable, relocatable, and or interchangeable sections and MRI imaging systems and methods employing the same

DATE-ISSUED: July 8, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wu; Dee H.	Shaker Heights	OH		
Burl; Michael	Chagrin Falls	OH		
Reden; Laura M.	Lyndhurst	OH		
Carlson; John T.	Madison	OH		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Koninklijke Philips <u>Electronics</u> , N.V.	Eindhoven			NL		03

APPL-NO: 09/710376 [PALM]

DATE FILED: November 9, 2000

INT-CL-ISSUED: [07] A61B 5/05

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPP	<u>G01 R 33/34</u>	20060101

US-CL-ISSUED: 600/422; 324/318

US-CL-CURRENT: 600/422; 324/318

FIELD-OF-CLASSIFICATION-SEARCH: 600/422, 600/423, 600/421, 324/318, 324/309, 324/322, 324/300, 324/306, 324/307, 324/304

See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

stimulation devices and adjusting patient access and comfort. Since the operator can select coil removal or placement to reduce the amount of data outside the region of interest, the coil construction can also reduce scanning and reconstruction time, reduce artifacts, and provide increased temporal resolution and image throughput.

35 Claims, 11 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	FIGS	Draw D
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☐ 14. Document ID: US 6004269 A Relevance Rank: 72

L21: Entry 19 of 23

File: USPT

Dec 21, 1999

US-PAT-NO: 6004269

DOCUMENT-IDENTIFIER: US 6004269 A

TITLE: Catheters for imaging, sensing electrical potentials, and ablating tissue

DATE-ISSUED: December 21, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Crowley; Robert J.	Wayland	MA		
Abele; John E.	Concord	MA		
Lennox; Charles D.	Hudson	NH		
Ropiak; Susan M.	Hanscom Air Force Base	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Boston Scientific Corporation	Watertown	MA			02

APPL-NO: 08/473137 [PALM]

DATE FILED: June 7, 1995

PARENT-CASE:

This application is a continuation-in-part of U.S. application Ser. No. 08/086,523, filed Jul. 1, 1993 and now abandoned, U.S. application Ser. No. 08/086,543 filed Jul. 1, 1993 and now abandoned, and U.S. application Ser. No. 08/086,740 now abandoned, all of which were filed on Jul. 1, 1993, and the entire disclosures of which are hereby incorporated herein by reference. The entire disclosures of U.S. Pat. No. 4,951,677 and U.S. Pat. No. 5,421,338 are also hereby incorporated herein by reference.

INT-CL-ISSUED: [06] A61B 8/00, A61B 5/04, A61N 1/06

INT-CL-CURRENT:

TYPE IPC	DATE
CIPS <u>A61 B 17/22</u>	20060101
CIPS <u>A61 B 8/12</u>	20060101

fluid to the internal structure. The ablation device (55) may include a material that vibrates in response to electrical excitation, the ablation being at least assisted by vibration of the material. The ablation device may alternatively be a transducer (414) incorporated into the catheter (6), arranged to convert electrical signals into radiation and to direct the radiation toward the internal structure. The electrode may be a sonolucent structure (304, 334) incorporated into the catheter (6).

13 Claims, 98 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMIC	Drawings
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☐ 15. Document ID: US 5588432 A Relevance Rank: 72

L21: Entry 22 of 23

File: USPT

Dec 31, 1996

US-PAT-NO: 5588432

DOCUMENT-IDENTIFIER: US 5588432 A

TITLE: Catheters for imaging, sensing electrical potentials, and ablating tissue

DATE-ISSUED: December 31, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Crowley; Robert J.	Wayland	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Boston Scientific Corporation	Watertown	MA			02

APPL-NO: 08/500115 [PALM]

DATE FILED: July 10, 1995

PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATIONS This is a continuation of application Ser. No. 08/086,523, filed Jul. 1, 1993, now abandoned, which is a continuation-in-part of U.S. application Ser. No. 07/988,322, filed Dec. 9, 1992 now U.S. Pat. No. 5,372,138 by Robert J. Crowley et al., which is a continuation of U.S. application Ser. No. 07/570,319, filed Aug. 21, 1990 by Robert J. Crowley et al. and now abandoned, which is a continuation-in-part of U.S. application Ser. No. 07/171,039, now U.S. Pat. No. 4,951,677, filed Mar. 21, 1988 by Robert J. Crowley et al. The entire disclosures of U.S. Pat. No. 4,951,677 and U.S. application Ser. No. 07/570,319 are hereby incorporated herein by reference.

INT-CL-ISSUED: [06] A61B 8/12

INT-CL-CURRENT:

TYPE IPC	DATE
CIPN <u>A61 B 17/34</u>	20060101
CIPN <u>A61 B 17/22</u>	20060101

16. Document ID: US 20040092825 A1 Relevance Rank: 72

L21: Entry 6 of 23

File: PGPB

May 13, 2004

PGPUB-DOCUMENT-NUMBER: 20040092825
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20040092825 A1

TITLE: Techniques for identifying molecular structures and treating cell types
lining a body lumen using fluorescence

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Madar, Igal	Baltimore	MD	US
Murphy, John C.	Clarksville	MD	US

APPL-NO: 10/633446 [PALM]
DATE FILED: August 1, 2003

RELATED-US-APPL-DATA:
non-provisional-of-provisional 60400325 20020801 US

INT-CL-PUBLISHED: [07] A61B 6/00

INT-CL-CURRENT:

TYPE IPC DATE
CIPP A61 K 49/00 20060101

US-CL-PUBLISHED: 600/473; 600/476, 604/890.1, 424/009.2, 250/459.1
US-CL-CURRENT: 600/473; 250/459.1, 424/9.2, 600/476, 604/890.1

REPRESENTATIVE-FIGURES: 3

ABSTRACT:

Techniques for detecting fluorescence emitted by molecular constituents in a wall of a body lumen include introducing an autonomous solid support into the body lumen. Cells in a lumen wall of the body lumen are illuminated by a light source mounted to the solid support with a wavelength that excites a particular fluorescent signal. A detector mounted to the solid support detects whether illuminated cells emit the particular fluorescent signal. If the particular fluorescent signal is detected from the illuminated cells, then intensity or position in the lumen wall of the detected fluorescent signal, or both, is determined. These techniques allow the information collected by the capsule to support diagnosis and therapy of GI cancer and other intestinal pathologies and syndromes. For example, these techniques allow diagnostic imaging using endogenous and exogenous fluoroprobes, treating diseased sites by targeted release of drug with or without photoactivation, and determining therapeutic efficacy.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims benefit of Provisional Appln. 60/400,325, filed Aug. 1, 2002, the entire contents of which are hereby incorporated by reference as if fully set forth herein, under 35 U.S.C. .sctn.119(e).

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	IMC	Draw D
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☐ 17. Document ID: US 5840031 A Relevance Rank: 72

L21: Entry 20 of 23

File: USPT

Nov 24, 1998

US-PAT-NO: 5840031

DOCUMENT-IDENTIFIER: US 5840031 A

**** See image for Certificate of Correction ****

TITLE: Catheters for imaging, sensing electrical potentials and ablating tissue

DATE-ISSUED: November 24, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Crowley; Robert J.	Wayland	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Boston Scientific Corporation	Boston	MA			02

APPL-NO: 08/475896 [PALM]

DATE FILED: June 7, 1995

PARENT-CASE:

This application is a divisional of U.S. application Ser. No. 08/086,523, filed Jul. 1, 1993 and now abandoned. The entire disclosures of U.S. Pat. No. 4,951,677 and U.S. Pat. No. 5,421,338 are hereby incorporated herein by reference.

INT-CL-ISSUED: [06] A61B 8/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	<u>A61 B 17/22</u>	20060101
CIPN	<u>A61 B 18/00</u>	20060101
CIPS	<u>A61 B 18/14</u>	20060101
CIPN	<u>A61 B 19/00</u>	20060101
CIPS	<u>B06 B 1/06</u>	20060101
CIPS	<u>A61 B 8/12</u>	20060101
CIPN	<u>A61 B 17/00</u>	20060101

US-CL-ISSUED: 600/440; 607/122

US-CL-CURRENT: 600/440; 607/122

FIELD-OF-CLASSIFICATION-SEARCH: 128/660.03, 128/662.06, 128/654, 128/786, 128/642,

Coronary Sinus: Implications for the Wolff-Parkinson-White Syndrome"; Lasers in Surgery and Medicine 10:140--148 (1990).
Selle, "Definitive Surgery for Postinfarction Ventricular Tachycardia"; Coronary Artery Disease, Mar. 1992 vol. 3, No. 3, pp. 204-209.
Sung, "Arrhythmias and the Autonomic Nervous System"; Cardio, pp. 77-80; Sep. 1987; Nov.--Dec., 1986, Part II, pp. 1396-1402.
Tarjan et al., "An Experimental Device for Low-Energy Precise Ablation of AV Conduction", PACE, vol. 9.

ART-UNIT: 335

PRIMARY-EXAMINER: Jaworski; Francis

ATTY-AGENT-FIRM: Lyon & Lyon LLP

ABSTRACT:

An acoustic imaging system for use within a heart has a catheter, an ultrasound device incorporated into the catheter, and an electrode mounted on the catheter. The ultrasound device directs ultrasonic signals toward an internal structure in the heart to create an ultrasonic image, and the electrode is arranged for electrical contact with the internal structure. A chemical ablation device mounted on the catheter ablates at least a portion of the internal structure by delivery of fluid to the internal structure. The ablation device includes a material that vibrates in response to electrical excitation, the ablation being at least assisted by vibration of the material. The ablation device may alternatively be a transducer incorporated into the catheter, arranged to convert electrical signals into radiation and to direct the radiation toward the internal structure. The electrode may be a sonolucent structure incorporated into the catheter, through which the ultrasound device is arranged to direct signals. An acoustic marker mounted on the catheter emits a sonic wave when electrically excited. A central processing unit creates a graphical representation of the internal structure, and super-imposes items of data onto the graphical representation at locations that represent the respective plurality of locations within the internal structure corresponding to the plurality of items of data. A display system displays the graphical representation onto which the plurality of items of data are super-imposed.

27 Claims, 53 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMIC	Draw D
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18. Document ID: US 20050187488 A1 Relevance Rank: 72

L21: Entry 2 of 23

File: PGPB

Aug 25, 2005

PGPUB-DOCUMENT-NUMBER: 20050187488

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050187488 A1

TITLE: System for transcutaneous monitoring of intracranial pressure (ICP) using near infrared (NIR) telemetry

PUBLICATION-DATE: August 25, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Wolf, Erich W.	Lake Charles	LA	US

APPL-NO: 11/065428 [PALM]
DATE FILED: February 24, 2005

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60547691 20040225 US
non-provisional-of-provisional 60577807 20040608 US
non-provisional-of-provisional 60582337 20040623 US

INT-CL-PUBLISHED: [07] A61B 5/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	A61 B 5/00	20060101
CIPS	A61 B 5/03	20060101

US-CL-PUBLISHED: 600/561; 128/903

US-CL-CURRENT: 600/561; 128/903

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A system for measuring and converting to an observer intelligible form an internal physiological parameter of a medical patient. The invention allows transcutaneous telemetry of the measured information intracranial pressure via a system which includes a patient implanted sensor module and a processing and display module which is external of the patient and optically coupled to the sensor module via an external coupling module. A sensor within the implanted module transduces the measured information and a near infrared (NIR) emitter transmits this telemetry information when interrogated by the complementary external coupling module. Power for the sensor module is derived inductively through rectification of a transcutaneously-applied high-frequency alternating electromagnetic field which is generated by a power source within the external coupling module, in concept much like a conventional electrical transformer. A computer within the processing and display module calculates the parameter value from the NIR telemetry signal and represents this data either in numerical, graphical, or analog format.

RELATED APPLICATIONS

[0001] This application claims priority from U.S. Provisional Applications 60/547,691 filed Feb. 25, 2004; 60/577,807 filed Jun. 8, 2004; and 60/582,337 filed Jun. 23, 2004.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RINC	Draw D
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19. Document ID: US 20040204642 A1 Relevance Rank: 71

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RMIC	Draw D
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20. Document ID: US 6501274 B1 Relevance Rank: 69

L21: Entry 16 of 23

File: USPT

Dec 31, 2002

US-PAT-NO: 6501274

DOCUMENT-IDENTIFIER: US 6501274 B1

TITLE: Magnetic resonance imaging system using coils having paraxially distributed transmission line elements with outer and inner conductors

DATE-ISSUED: December 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ledden; Patrick	Malden	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Nova Medical, Inc.	Wakefield	MA			02

APPL-NO: 09/684680 [PALM]

DATE FILED: October 7, 2000

PARENT-CASE:

RELATED APPLICATIONS The applicant herein claims the benefit of U.S. Provisional Patent Application No. 60/159,662, dated Oct. 15, 1999 for HIGH RESOLUTION MAGNETIC RESONANCE IMAGING SYSTEM in the name of Patrick Ledden, the applicant herein.

INT-CL-ISSUED: [07] G01V 3/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPS	<u>G01 R 33/32</u>	20060101
CIPS	<u>G01 R 33/36</u>	20060101

US-CL-ISSUED: 324/318

US-CL-CURRENT: 324/318

FIELD-OF-CLASSIFICATION-SEARCH: 324/318-322
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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<u>4506224</u>	March 1985	Krause	
<u>4746866</u>	May 1988	Roschmann	
<u>4751464</u>	June 1988	Bridges	
<u>4887039</u>	December 1989	Roemer et al.	
<u>5557247</u>	September 1996	Vaughan, Jr.	
<u>5986454</u>	November 1999	Leifer	324/318
<u>5990681</u>	November 1999	Richard et al.	324/318
<u>6043658</u>	March 2000	Leussier	324/318
<u>6150816</u>	November 2000	Srinivasan	324/318
<u>6169401</u>	January 2001	Fujita et al.	324/318

OTHER PUBLICATIONS

Ledden et al., "Volume Coil Transmit Surface Coil Receive System for Brain Imaging at 3T", Proceedings of the International Society of Magnetic Resonance in Medicine, p. 168 (1999).

ART-UNIT: 2862

PRIMARY-EXAMINER: Lefkowitz; Edward

ASSISTANT-EXAMINER: Vargas; Dixomara

ATTY-AGENT-FIRM: Morse, Altman & Martin

ABSTRACT:

A magnetic resonance imaging system comprises: a housing providing a medical diagnostic chamber for a subject therewithin lying along an axis. The housing contains: a transmit/receive inductor system having a coil about the axis in proximity with the housing, a gradient inductor system having a coil operatively associated with the transmit/receive inductor system, and a field inductor system having a coil operatively associated with the transmit/receive inductor system. The field coil establishes a supervening field about the entire system. The gradient coil initiates perturbations in the fields and produces signals derived responsively from the perturbations. The transmit/receive coil includes a series of electrical transmission line elements paraxially distributed with respect to the axis about the subject. Each transmission line element includes an outer conductor and an inner conductor spaced radially from the outer conductor relative to the axis. The transmit/receive coil initially transmits to the subject a radio frequency energy field and responsively receives from the subject a magnetic resonance energy field. The signals produced correspond to spatial indicia derived from the subject and are presented as such by a master controller.

74 Claims, 28 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	RMOC	Drawings
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☐ 21. Document ID: US 7012429 B1 Relevance Rank: 68

L21: Entry 10 of 23

File: USPT

Mar 14, 2006

<u>5721490</u>	February 1998	Takano et al.	324/322
<u>5742163</u>	April 1998	Liu et al.	324/309
<u>5777474</u>	July 1998	Srinivasan	324/318
<u>5898306</u>	April 1999	Liu et al.	324/322
<u>5986454</u>	November 1999	Leifer	
<u>5990681</u>	November 1999	Richard et al.	
<u>5998999</u>	December 1999	Richard et al.	324/318
<u>6029082</u>	February 2000	Srinivasan et al.	600/422
<u>6040697</u>	March 2000	Misic	324/318
<u>6043658</u>	March 2000	Leussler	
<u>6150816</u>	November 2000	Srinivasan	
<u>6169401</u>	January 2001	Fujita et al.	324/318
<u>6249121</u>	June 2001	Boskamp et al.	324/318
<u>6323648</u>	November 2001	Belt et al.	324/322
<u>6396271</u>	May 2002	Burl et al.	324/318
<u>6404199</u>	June 2002	Fujita et al.	324/318
<u>6411090</u>	June 2002	Boskamp	324/318
<u>6420871</u>	July 2002	Wong et al.	324/318
<u>6501274</u>	December 2002	Ledden	324/318
<u>6522143</u>	February 2003	Fujita et al.	324/318
<u>6590392</u>	July 2003	Boskamp et al.	324/318
<u>6670863</u>	December 2003	Van Helvoort et al.	333/12

ART-UNIT: 2859

PRIMARY-EXAMINER: Gutierrez; Diego

ASSISTANT-EXAMINER: Vargas; Dixomara

ATTY-AGENT-FIRM: Altman & Martin

ABSTRACT:

An magnetic resonance imaging system having a housing comprising a transmit and/or receive inductor system having a coil about the housing axis in proximity with the housing. The transmit and/or receive coil includes a series of electrical transmission line elements distributed with respect to the axis about the subject. Each transmission line element includes an outer conductor and an inner conductor spaced radially from the outer conductor relative to the axis. Capacitive elements are dispersed among the inner conductor and outer conductor. The coil includes capacitive elements connecting pairs of conductors. The capacitive elements may connect pairs of outer conductors or pairs of inner conductors.

59 Claims, 28 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Drawings
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22. Document ID: US 20020168317 A1 Relevance Rank: 68

The invention also covers in situ gene therapy using a beta or gamma radiation detection probe to locate radio-labeled cells, and the delivery of corrective or therapeutic genes to the candidate cells identified by the radiation detection probe while the probe is positioned adjacent to the labeled and located cells. Also covered is the identification of vulnerable plaque in atherosclerotic vessels and diseased myocardial tissue in the heart, treatment of that plaque or diseased tissue and the subsequent determination of the efficacy of the treatment.

Devices for use in the procedures include, intraoperative radiation detection probes, intraoperative radiation detection probes, intraoperative radiation imaging probes, catheter mounted radiation detection probes and probes attached to surgical gloves so that the probe tip can be manually manipulated by the physician and placed adjacent to suspect tissue at an operative site.

[0001] This application is a continuation-in-part of U.S. Ser. No. 09/518,457 filed Mar. 3, 2000 and incorporates the disclosures set forth, under the Disclosure Document Program, Serial No. 489,310 filed Feb. 26, 2001, the Disclosure Document filed Mar. 12, 2001 entitled "METHODS AND DEVICES TO EXPAND APPLICATIONS OF INTRAOPERATIVE RADIATION PROBES" and Disclosure Document, Serial No. 491,121, filed Mar. 21, 2001 and claims benefit of Provisional Patent Application 60/303, 329 filed Jul. 5, 2001.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	R000	Draw D
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23. Document ID: US 6304246 B1 Relevance Rank: 67

L21: Entry 17 of 23

File: USPT

Oct 16, 2001

US-PAT-NO: 6304246

DOCUMENT-IDENTIFIER: US 6304246 B1

TITLE: Input device for shifting a marker on a monitor screen

DATE-ISSUED: October 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kuth; Rainer	Herzogenaurach			DE
Koch; Harald	Rosenheim			DE

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Siemens Aktiengesellschaft	Munich			DE	03

APPL-NO: 09/134932 [PALM]

DATE FILED: August 17, 1998

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DE	197 36 928	August 25, 1997

INT-CL-ISSUED: [07] G09G 5/08

ABSTRACT:

An input device for shifting a marker on a monitor has a completely closed, hermetically sealed and sterilizeable housing with an electrical shield, at least one sensor arrangement for detecting movement of the housing, an evaluation unit connected with the sensor arrangement, and a conversion unit connected to the evaluation unit downstream for converting the signals emitted by the evaluation unit into corresponding modulated signals. The sensor arrangement, the evaluation unit and the conversion unit are arranged entirely within the shield as is a transmitting unit for radiating the modulated signals into the environment, where they are detected by a receiver positioned in the environment and are converted into signals for shifting the marker on the monitor.

15 Claims, 5 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	DOMC	Draw. Des.
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Term	Documents
DOME	101235
DOMES	11959
(19 AND DOME) . PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD.	23
(L19 AND DOME) . PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD.	23

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